

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

| | |
|---|---|
| TYPE OF WELL OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____ ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/> | Refiling <input type="checkbox"/> Sidetrack <input type="checkbox"/> |
|---|---|

Date Received:
12/08/2016

Well Name: Cherry Knolls West Well Number: 33-12

Name of Operator: EDGE ENERGY LLC COGCC Operator Number: 10518

Address: 621 17TH STREET SUITE 1401

City: DENVER State: CO Zip: 80293

Contact Name: Julie Webb Phone: (720)359-1612 Fax: ()

Email: jwebb@progressivepcs.net

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20160056

WELL LOCATION INFORMATION

QtrQtr: NWSW Sec: 33 Twp: 1N Rng: 65W Meridian: 6

Latitude: 40.007240 Longitude: -104.674560

| | | |
|--------------------------------------|-----------------------------|-----------------------------|
| Footage at Surface: <u>2443</u> Feet | FNL/FSL | FEL/FWL |
| <u>FSL</u> <u>1089</u> Feet | <u>FSL</u> <u>1089</u> Feet | <u>FWL</u> <u>1089</u> Feet |

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 5106 County: WELD

GPS Data:
Date of Measurement: 10/20/2016 PDOP Reading: 1.9 Instrument Operator's Name: Casey Kohout

If well is Directional Horizontal (highly deviated) **submit deviated drilling plan.**

| | | | | | |
|---|----------------------------|----------------------------|---|----------------------------|----------------------------|
| Footage at Top of Prod Zone: <u>660</u> Feet | FNL/FSL | FEL/FWL | Bottom Hole: <u>660</u> Feet | FNL/FSL | FEL/FWL |
| <u>FSL</u> <u>470</u> Feet | <u>FSL</u> <u>470</u> Feet | <u>FWL</u> <u>470</u> Feet | <u>FSL</u> <u>470</u> Feet | <u>FSL</u> <u>470</u> Feet | <u>FEL</u> <u>470</u> Feet |
| Sec: <u>33</u> Twp: <u>1N</u> Rng: <u>65W</u> | | | Sec: <u>33</u> Twp: <u>1N</u> Rng: <u>65W</u> | | |

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: Fee State Federal Indian

The Surface Owner is: is the mineral owner beneath the location.
(check all that apply) is committed to an Oil and Gas Lease.
 has signed the Oil and Gas Lease.
 is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: Yes

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

T1N-65W-33:All

Total Acres in Described Lease: 640 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 470 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1992 Feet

Building Unit: 1992 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 2427 Feet

Above Ground Utility: 1146 Feet

Railroad: 5280 Feet

Property Line: 205 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).

- Enter 5280 for distance greater than 1 mile.

- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.

- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: Buffer Zone
 Exception Zone
 Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit

- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.

- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 330 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 470 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

Spacing Unit: Sec. 33: S2S2

OBJECTIVE FORMATIONS

| Objective Formation(s) | Formation Code | Spacing Order Number(s) | Unit Acreage Assigned to Well | Unit Configuration (N/2, SE/4, etc.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| CODELL | CODL | | 160 | GWA |

DRILLING PROGRAM

Proposed Total Measured Depth: 11883 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 350 Feet No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? No

BOP Equipment Type: Annular Preventor Double Ram Rotating Head None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

| Casing Type | Size of Hole | Size of Casing | Wt/Ft | Csg/Liner Top | Setting Depth | Sacks Cmt | Cmt Btm | Cmt Top |
|-------------|--------------|----------------|-------|---------------|---------------|-----------|---------|---------|
| CONDUCTOR | 26 | 16 | 65 | 0 | 80 | 100 | 80 | 0 |
| SURF | 13+1/2 | 9+5/8 | 36 | 0 | 1500 | 479 | 1500 | 0 |
| 1ST | 8+3/4 | 5+1/2 | 20 | 0 | 11883 | 1931 | 11883 | |

Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

Rule 318.c. Exception Location from Rule or Spacing Order Number _____

Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments Nearest well in the same formation is a pad well Cherry Knolls 33-11.
Nearest offset operated well is CHAMPLIN 365 AMOCO #1, 123-08995 (AMOCO PRODUCTION), well status DA Letter to the Director for COGCC Rule 318A.a. Exception Location Request, attached as Exception Loc Request.

Surface Use Agreement has waivers for Rule 318A.a & 318A.c. See page 2 & 3, Section 7.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Julie Webb

Title: Regulatory Analyst Date: 12/8/2016 Email: jwebb@progressivepcs.net

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 1/20/2017

Expiration Date: 01/19/2019

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|-------------------|
| API NUMBER |
| 05 123 44103 00 |

Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

| <u>COA Type</u> | <u>Description</u> |
|-----------------|---|
| | Operator will comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012. |
| | Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 3). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. 05-123-08629, KILKER 1 05-123-10181, CHAMPLIN 365 AMOCO UNIT A 2 05-123-19677, HSR-CHERRY KNOLLS 9-33 05-123-12937, JORDAN 34-9 05-123-14809, JORDAN-LOUSTAUNAU 34-10 |
| | 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad. 2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 200' above Niobrara. Verify coverage with cement bond log. |
| | Bradenhead tests shall be performed according to the following schedule and the Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release and prior to stimulation and 2) If a delayed completion, 6 months after rig release and prior to stimulation. 3) Within 30 days after first production, as reported on Form 5A. |

Best Management Practices

| No | BMP/COA Type | Description |
|----|--------------------------------|---|
| 1 | Planning | <p>Visual Impacts: All long term facility structures will be painted a color that enables the facilities to blend in with the natural background color of the landscape, as seen from a viewing distance and location typically used by the public.</p> <p>Odors and Dust: Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.</p> |
| 2 | Drilling/Completion Operations | <p>Green Completions - Emission Control Systems: Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules where reservoir pressure, formation productivity, and wellbore conditions are likely to enable the well to be capable of naturally flowing hydrocarbon gas in flammable or greater concentrations at a stabilized rate in excess of five hundred (500) MCFD to the surface against an induced surface backpressure of five hundred (500) psig or sales line pressure, whichever is greater. In the absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where noncombustible gases are present. All salable quality gas shall be directed to the sales line as soon as practicable or shut in and conserved.</p> |
| 3 | Drilling/Completion Operations | <p>One of the first wells drilled on the pad will be logged with Open Hole Resistivity Log and Gamma Ray Log from the kick-off point to into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. The form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run.</p> |
| 4 | Drilling/Completion Operations | <p>Prior to drilling operations, Operator will perform a risk analysis of the potential for subsurface collision with existing offset wells within close proximity of the proposed well, taking into consideration the possibility of well path drift for both the existing and proposed wells. Where inclination, MWD or gyro surveys of the offset wells are available, or can be reasonably obtained by the operator, such surveys shall be incorporated in the risk analysis, taking into account survey instrument margin of error. For the proposed well, upon conclusion of drilling operations, an as-constructed final directional survey will be submitted to the COGCC with the Form 5.</p> |

Total: 4 comment(s)

Applicable Policies and Notices to Operators

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|---|
| Policy |
| <p>Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</p> |
| <p>Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area. http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf</p> |

Attachment Check List

| Att Doc Num | Name |
|--------------------|----------------------------|
| 1696744 | SURFACE AGRMT/SURETY |
| 401145978 | FORM 2 SUBMITTED |
| 401153878 | WELL LOCATION PLAT |
| 401163649 | OffsetWellEvaluations Data |
| 401163654 | DEVIATED DRILLING PLAN |
| 401163655 | PROPOSED SPACING UNIT |
| 401163656 | EXCEPTION LOC REQUEST |
| 401163658 | SURFACE AGRMT/SURETY |
| 401163661 | DIRECTIONAL DATA |
| 401190201 | OFFSET WELL EVALUATION |

Total Attach: 10 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|--------------------------|---|----------------------------|
| Permit | Final Review Completed. Corrected drilling fluids and cuttings disposal to OFFSITE to agree with related Form 2A. | 01/20/2017 |
| Permit | Per operator the correct Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation is 330'. Added the Anti-Collision and Bradenhead BMP. Added to operator comments " Surface Use Agreement has waivers for Rule 318A.a & 318A.c. See page 2&3, Section 7." Permitting Review Complete. | 01/05/2017 |
| Permit | Open Hole Logging BMP submitted by operator. | 01/05/2017 |
| Permit | Attached amendment to the SUA with the corrected surface hole location. | 01/05/2017 |
| Permit | Passed completeness. | 12/19/2016 |
| Permit | Corrected Ground Elevation to match Well Location Plat. | 12/19/2016 |

Total: 6 comment(s)